12221

LORAN-C OVERPRINTED

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

Nautical Miles
Yards

NOTE S
Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices. Lighted Buoys A through F are unchanted due to frequent relocations.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilots 3 and 4 for important supplemental information.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Director, Charting and Geodetic Services (N/CG22), National Ocean Service, NOAA, Rockville, Maryland 20852.

Formerly C&GS 1222, 1st Ed., Mar. 1913; Q-1952-784

NOTE F
The 12 nautical mile territorial sea was established by Presidential Proclamation 5928, December 27, 1988, and is also the outer limit of the U.S. contiguous zone for the application of domestic law. The 3 nautical mile line, previously identified as the outer limit of the territorial sea, is retained because the proclamation states that it does not alter existing State boundaries. The 9 nautical mile natural resources boundary off Texas, the Gulf coast of Florida, and Puerto Rico, and the 3 nautical mile line elsewhere remain the inner boundary of the Fishery Conservation jurisdiction and the limit of states' jurisdiction under the Submerged Lands Act (43 U.S.C. 1301 et seq., 67 Stat. 29, March 22, 1953). These maritime limits are subject to modification by representatives of future charts. The lines shown on the most recent chart edition take precedence.

NOTE I
Wolf Trap Dumping Ground lighted buoys "A", "B" and "C" are not charted due to frequent relocations.

NOTE G
TRAFFIC SEPARATION SCHEME
The RECOMMENDED route for entering and departing from Chesapeake Bay is marked by a tinted magenta line centered on a line of fairway buoys which separates the courses of inbound and outbound vessels. Vessels should leave all buoys on their port hand. The pilotage area is marked by a tinted magenta band. Traffic within the precautionary area may consist of vessels operating between Thimble Shoal and Chesapeake Channels and one of the established traffic lanes. Mariners are advised to exercise extreme care in navigating within this area.
The traffic separation scheme has been designed to aid in the prevention of collisions at the approaches to Chesapeake Bay but is not intended in any way to supersede or alter the applicable Rules of the Road.

CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.
During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

For Symbols and Abbreviations see Chart No. 1.
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus

AUTHORITIES
Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Corps of Engineers and U.S. Coast Guard.

CAUTION
FISH TRAP AREAS AND STRUCTURES
Mariners are warned that numerous uncharted duck blinds and fishing structures, some submerged, may exist in the fish trap areas. Such structures are not charted unless known to be permanent.
Regulations to assure clear passage to and through dredged and natural channels and to established landings are prescribed by the Corps of Engineers in the Code of Federal Regulations.
Definite limits of fish trap areas have been established in some areas and those limits are shown thus
Where definite limits have not been prescribed the location of fishing structures is restricted only by the regulations.

RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility, if telephone communication is impossible. (33 CFR 153)

CAUTION
Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus

LOCAL MAGNETIC DISTURBANCE
Differences as much as 6° from the normal variation have been observed 3 to 17 nautical miles offshore from Cape Henry to Cornfield Beach Light.

NOTE C
HAMPTON ROADS TUNNEL-BRIDGE
APPROACH SPANS
HOR. CL 45 FT. | AUTH.
VERT. CL 70 FT.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service stations listed below provide continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.

Norfolk, Va.	KHB-37	162.55 MHz
Heathsville, Va.	WXM-57	162.40 MHz

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.52s" northward and 1.218" eastward to agree with this chart.

ARTICULATED AIDS
An articulated aid to navigation consists of a pipe structure that oscillates around a universal joint. Floating components of the structure is kept upright by the buoyancy of a submerged counterweight. It is designed primarily to mark narrow channels in depths of up to 60 feet. All articulated aids are labelled "Art".

NOTE D
DANGER AREA
Area is open to unrestricted surface navigation but all vessels are cautioned neither to anchor, dredge, trawl, lay cables, bottom, nor conduct any other similar type of operation because of residual danger from mines on the bottom.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 3 and 4. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 5th Coast Guard District in Portsmouth, Virginia, or at the Office of the District Engineer, Corps of Engineers in Norfolk, Virginia.
Refer to charted regulation section numbers.

TIDAL INFORMATION

Place Name	LAT.	LONG.	Height referred to datum of soundings (MLLW) High Water Mean feet	High Water Spring feet	Low Water Mean feet	Low Water Spring feet	Extreme Low Water feet
Great Machipongo Inlet	37°24'N	75°42'W	4.4	4.1	0.2	0.0	-2.5
Fishermans Island	37°06'N	75°58'W	3.4	3.2	0.2	0.0	-2.5
Old Point Comfort	37°00'N	76°19'W	2.0	2.5	0.1	-0.5	-3.5
Tue Marshes Light	37°03'N	76°08'W	2.3	2.8	0.1	-0.5	-3.5
Wolf Trap Light	37°25'N	76°11'W	1.6	1.7	0.1	-0.1	-3.0

NOTE E
Chesapeake Bay Bridge – Tunnel
(Privately maintained lights)
Trestles A and B – In each trestle section the fixed navigation openings for small craft consists of a group of 3 spans. A fixed green light marks centerline of each span and fixed red lights mark outermost bridge support piling on each side of the openings. North Channel & Fishermen Inlet Bridges – A fixed green light marks each mid-channel, with fixed lights marking channel limits. Fixed red obstruction lights mark each pier in Trestles C and D.

LYNNHAVEN INLET
Lynnhaven inlet is subject to continual change. The controlling depth in the improved channel is 7 feet.
May-June 1988

HEIGHTS
Heights in feet above Mean High Water

NOTE F
CAUTION
The Chesapeake Bay Bridge-Tunnel complex has on several occasions suffered damage from vessels due to adverse weather conditions. Currents in excess of three knots can be expected in the area. Mariners transiting this area are urged to be particularly alert in regards to the weather situation. The National Weather Service broadcasts 24 hour weather broadcasting on 162.55 MHz. A Coast Guard operator also transmits weather information at 0100, 0700, 1300, and 1900 hour time on 2536 and 2450 kHz. Transmission schedules are subject to change, see Notice to Mariners. Maneuvering in close proximity of the bridge-tunnel complex is discouraged.

LORAN-C
GENERAL EXPLANATION
LORAN-C FREQUENCY 100kHz
PULSE REPETITION INTERVAL ..... 99,800 Microseconds
9960
STATION TYPE DESIGNATORS (Not individual station designators)
M Master
V Secondary
W Secondary
X Secondary
Y Secondary
EXAMPLE 9960-X

RATES ON THIS CHART
9960-X 9960-Y 9960-Z
The Loran-C correction tables published by the Defense Mapping Agency or others should not be used with this chart. The lines of position shown have been adjusted based on survey data. Every effort has been made to meet the 2 nautical mile accuracy criteria established by U.S. Coast Guard Mariners, however, one cautioned not to rely solely on the lattices in inshore waters.

LORAN LINEAR INTERPOLATOR

NOTE B
YORK SPIT CHANNEL
Depths entering from seaward
Surveys of Oct 87-Apr 89

Left outside quarter	50.0 ft
Left inside quarter	49.9 ft
Right inside quarter	49.9 ft
Right outside quarter	45.1 ft

Note: Channel width mair dained at 800 feet

CAUTION
Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus
Accurate location ○ Approximate location

SAND SHOAL INLET
The channel is subject to continual change. Entrance buoys are not charted because they are shifted frequently in position.

UNITED STATES – EAST COAST
VIRGINIA
CHESAPEAKE BAY ENTRANCE
Mercator Projection
Scale 1:80,000 at Lat. 37°05'
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

SOUNDINGS IN FEET

Nautical Miles
Yards

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

58th Ed., Sept. 15/90

12221
LORAN-C OVERPRINTED

CAUTION
This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

C55: 418h: 12221/990

NOTE S

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SUPPLEMENTAL INFORMATION

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NOTE X

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RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

SOUNDINGS IN FEET

Nautical Chart Catalog No. 1, Panels D, E

LORAN-C

GENERAL EXPLANATION

LORAN-C FREQUENCY 100kHz
PULSE REPETITION INTERVAL
SWGRI ..... 99,600 Microseconds

STATION TYPE DESIGNATORS (Not individual station letter designators)
M ..... Master
W ..... Secondary
X ..... Secondary
Y ..... Secondary
Z ..... Secondary

EXAMPLE 9960-X

RATES ON THIS CHART

9960-X 9960-Y 9960-Z

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LORAN LINEAR INTERPOLATOR

NOTE B
YORK SPIT CHANNEL
Depths entering from seaward
Surveys of Oct 87-Apr 89

Left outside quarter	50 ft
Left inside quarter	49 ft
Right inside quarter	49 ft
Right outside quarter	45.1 ft

Note: Channel width maintained at 800 feet

CAUTION

Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.

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Station positions are shown thus:
⊙(Accurate location) ⊙(Approximate location)

NOTE D

DANGER AREA

Unrestricted surface navigation but ...tioned neither to anchor, dredge, ... bottom, nor conduct any other ...eration because of residual dan... the bottom.

AIDS TO NAVIGATION

...U.S. Coast Guard Light List for ...mental information concerning aids ...gation.

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ARTICULATED AIDS

...Articulated aid to navigation consists of a ...structure that oscillates around a universal ...joint connected to a anchor. The structure is ...held upright by the buoyancy of a submerged ...buoy chamber. It is designed primarily to ...mark narrow channels in depths of up to 80 feet. ...Articulated aids are labelled "Art".

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(Privately maintained lights)

Trestles A and B – In each trestle section the fixed navigation openings for small craft consists of a group of 3 spans. A fixed green light marks centerline of each span and fixed red lights mark outermost bridge support piling on each side of the openings. North Channel & Fishermen Inlet Bridges – A fixed green light marks each mid-channel, with fixed red light marking channel limits. Fixed red obstruction lights mark each pier in Trestles C and D.

LYNNHAVEN INLET

Lynnhaven Inlet is subject to continual change. The controlling depth in the improved channel is 7 feet.

May-June 1988

HEIGHTS

Heights in feet above Mean High Water.

NOTE F

CAUTION

The Chesapeake Bay Bridge–Tunnel complex has on several occasions suffered damage from vessels due to adverse weather conditions. Currents in excess of three knots can be expected in the area. Mariners transiting this area are urged to be particularly alert in regards to the weather situation. The National Weather Service broadcasts 24 hour weather forecasting on 162.55 MHz. The Local Marine operator also transmits weather information at 0100, 0700, 1300, and 1900 local time on 2538 and 2450 kHz. Transmitting schedules are subject to change, see Notice to Mariners. Maneuvering in close proximity of the bridge-tunnel complex is discouraged.

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Refer to charted regulation section numbers.

TIDAL INFORMATION

Place	Name	(LAT./LONG.)	Height referred to datum of sounding (MLLW) Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
			feet	feet	feet	feet
Great Machipongo Inlet		37°24'/75°42'W	4.5	3.8	0.2	-2.5
Fishermans Island		37°06'/75°58'W	3.4	2.8	0.1	-2.5
Old Point Comfort		37°01'/76°19'W	2.5	2.2	0.0	-2.3
Cape Charles Light		37°07'/76°01'W	2.9	2.5	0.1	-2.5
Wolf Trap Light		37°23'/76°11'W	1.9	1.7	0.1	-2.0

UNITED STATES — EAST COAST

VIRGINIA

CHESAPEAKE BAY ENTRANCE

Mercator Projection
Scale 1:80,000 at Lat. 37°00'
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

NOTE Y

Mariners are cautioned that the Ferry Route from Little Creek to Cape Charles may deviate from the published standard route due to inclement weather, traffic conditions, navigational hazards or other emergency conditions.

(Chesapeake Bay Entrance)
SOUNDINGS IN FEET SCALE 1:80,000

12221
LORAN-C OVERPRINTED

IN FEET

Nautical Miles

Yards